Topics

LA 99er COMPUTER GROUP

Newsletter

VOL. 5 NO. 9 Los Angeles, CA October 1986

TERRIES'S CORNER

Teresa Masters President

"TO SPEAK OF MANY THINGS"

George Steffen, our GOOD friend and outstanding club member, is unfortunately facing a health crisis at this time. Prayers, good wishes and plenty of positive thought welcome. Cards and letters can be sent to the club address and we will get them to George.

GOOD PRODUCT, GOOD PRIDE, GOOD PEOPLE

We 99/4A owners are a unique phenomena. Our friendship and our unselfish enthusiasm to share information, our willingness to mend fences and let bygones be exactly that, yes we are unique. We travel to distant areas to give our support to those supporting us. Barbara Voorhees, Tom Freeman and I went to Seattle to share their "FEST" with the Pacific Northwest area Clubs. Our thanks to Barbara Weiderhold and our Seatle friends for their hospitality.
George Steffen and I were scheduled for Chicago, unfortunately now I will go alone, but L.A. will be there. User Group members from other areas planning trips into other areas should try to contact the User Group in advance of their trip. We all welcome meeting others. We had a pleasant visit with Jerry Hough of the Boise User Group on his recent trip to L.A. Happily we met again in Seattle. Both Clubs benefit by this friendly exchange.

A couple of announcements from the Seattle Fest, Millers Graphics, Craig Miller whetted some appetites with a teaser of a "Big announcement" due in January. I have already seen him badly misquoted so I will leave the responsibility to him when he is ready. No neither Tom, George or I are privy to any inside info.

Myarc, Lou Phillips advised Geneve is essentially completed now, and should be shipped after assembly is completed. He is now able to focus on a Hard Disk/Floppy Disk Controller Card with Personality Card on board. I for one am quite anxious for this, have been haunting Swap Meets and already have bought a hard drive, a case and a power supply, so...Dear Santa....

Compuserve, Jim Horn announced the First Geneve User Group, now resident on Compuserve.

Regena, it was a pleasure to once again spend time with Cheryl Whitelaw, aka Regena. She sadly advised that Compute has quietly phased out her 99/4A column. Coincidently Micropendium is looking for a columnist for its ex-basic section, well John and Laura, the credentials are are there, your job should you choose to take it, is to convince the very busy lady that she can squeeze it in. Cheryl has remained with the basic/ex-basic languages and her expertise is there. Cheryl has released into the Freeware a disk of primarily educational programs for Children. She wrote them to fill the needs of her own Children. They are now in our Fairware Library.

Economy and the malice of my former employer caused me to take Greyhound to Seattle. It was a looong trying trip. On the return I decided to get off in San Francisco for a few hours and visit with Guy Steffan Romano. Well what a delightful few hours. Guy, manning the Amnion Helpline is a voice very familiar to many 99/4A users around the world! His deep knowlege and quick mind are a marvel to many of us. As for his culinary ability, well I rode through to Los Angeles without a single thought of food, and this after skipping dessert! Thank you Guy for a great visit.

Infocom, for those Infocom games afficionados out there, they are still releasing new ones, they of course have the format to release them for the 99/4A. They have to know you are out there and still in a buying frame of mind, so please write to them, INFOCOM P.O. Box 478, Cresskill, New Jersey 07626.

99er magazine aka HCM aka HCJ, update.
Mike Dodd, a fine programmer and Newsletter Editor called me to tell me he had followed the suggestions we printed to get his subscription money refunded. He was offerred ONE dollar and change, after he returns HCM and diskette. To quote Mike "the return postage is more than that!!!" Mike also wonders what of the additional money he sent for the HCM on Disk. What a SCAM!

Constitution revision, A committee has been working on tailoring the Constitution, the revised one was presented to the Board at the last meeting, the final version will be on hand at the meeting for the approval of the Membership in attendance.

Elections, I will shortly be appointing a nominating committee, please consider qualified candidates for the Officer positions. We have a good club and want to see it continue under new leadership.

Our meetings are getting better and better thanks to the efforts of Fletcher Wicker, Steve Chalcraft and George Hutton. Ahead of us is a meeting devoted to Modem Telecommunications, another on Graphics and RLE. If you have suggestions please make them to one of the aforementioned and we will follow through.

Kent Thomson has been quite busy writing a program designed for the Investor with a 99/4A. This has been a focus of Kent's interest, having previously released the Real Estate Investment package followed by the EE Bondmaster. So at the next meeting and that is Oct. 22 (the fourth Wednesday there are five Wednesdays this month) Kent will demonstrate MFM Mutual Fund Manager. He is making a special price offer his complete package of 7 programs plus 70 pages of Documentation for only $20.00. Don't miss this bargain.

A utilitarian bargain I picked up in Seattle will be available for our members at the next meeting. It is a glossy well printed heavy sheet of program strips. It includes strips for Ti-Writer, Companion, Multi-plan, ES/AS Forth, Graphx, Ti-Artist, Fast Term and TE11. A good value I suggest other Clubs reading this newsletter contact our friends at Texas Instrument Computer Club of British Columbia, POB 84, White Rock B.C. Canada V4B 4Z7. Send $1.50 for each one, well worth it.

Publications for 99/4A, inside this Newsletter are applications for GOOD Publications supporting our Computer. I strongly suggest we show our appreciation and subscribe.

Shrine, L.A. 99er will once again have a Booth at the Computer Sellathon Oct 25 and 26. Look for us there.

99'FEST-WEST'87 at the moment it looks like it will be a go MAY 2 and 3 1987. I am in the process with the help of Steve Mehr to arrange a meeting with the Presidents of ALL the Southern California and propose the 1987 Fest be a joint effort of all Clubs. More on this later.

PAOLO'S POINT OF VIEW

[This letter was written by Paolo Bagnaresi, a member of the LA 99'er User Group, to Bob Boone of the Ottawa User Group]

Dear Bob,

TI-99/4A seems to be the fourth largest used computer, Commodore VIC 20 and C-64 being first. They are followed by ZX Spectrum and QL (Sinclair) and Apple II. However, PC IBM and compatibles are catching up really fast. Other Computers, Atari 510-1040 ST, Apple McIntosh; are slowly increasing their market share. Commodore Amiga hasn't shown up yet: It will be available in the next few months

TI-99/4A typical configuration is console and tape recorder. A 5-10 percent of owners have also the disk drive system, expansion memory, a RS232 and a printer. Few users also have a second drive and maybe some fancy disk controller (CorComp or Atronic, this one from Germany).

Users of TI-99/4A have not gathered into any user group. This may be due to the Mediterranian way of life: everybody does not trust too much anybody else. Moreover, in a user group you would have to work for free. Are we crazy? We do not like to work even if we get paid for, let alone for free. No way we will do it. Some others argued that a TI club could be seen as a blatant American supporting team: we could be bombed by our mighty neighbor on the other side of the Mediterranean Sea (Khaddafi) as a dangerous US base (since we would have US computers we might as well have some US missle, couldn't we?). I think that it is mainly for this second reason why we do not have a user group.

There is a wild Frontier life here. You exchange a program for another program, sometimes for two programs, if you are lucky. If you do hot have anything to exchange with, chances are you are gonna pay for that program you want. Mind, we are talking about programs that have been imported, that are copyrighted, that are sold by dealers in North America at regular prices. Anyway, no one here seems to give a damn about copyright, about rewarding a programmer. The only concern seems to be "is is copyable? that's enough, what the hell!

Here the real smart guy will join a user group in the US, get some really good stuff and then he will sell it all

over Italy: prices for any program from US span $15 to $35. To the smart guy that programs costs $2.00 each, the copy fee he payed to the US user group! Good business, isn't it? Here there is a real spaghetti market. Only spaghetti, the meat balls are gone forever.

I know one of those smart guy, he lives in Bologna. He used to write US user group pretending he wan an user group! He was also able to get his name publised on Home Computer ZMagazine, Oregon, USA. In this way he was able to receive a vast number of programs. Now he can sell you ANY program you can think of, no matter what. Obviously, having been in this business for over three years, he did not have time to learn to program yet. But after all, who cares ? Good money will come to him as a steady flow anyway: net income, no income tax to pay, no anything. Good life, isn't it?

Ah, I forgot to tell you: documentation will not be provided by the pirate. It is like a "mafia": a dumb user it is not supposed to have the right to know how to use a program. The less he knows, the better for the pirate distributor. Obviously the dumb user gets hungry for some understandable program. Eventually, he will some other proigram from the pirate distributor, a program that will be more or less the same as the one he bought previously. That program was rather useless, wasn't it? The next one will be the same. By now, the trend has already been started. The dumb user gets addicted to the pirate distributor. He will consider him like a good willing person who does his best to help the fellow man. T pirate distributor is his friend, no doubt about it. If only those darned programs were easier to use....

On the other hand, photocopies are too costly and too time consuming. As a result, intelligent users will have to figure out by themselves how to use that pirate program: well, well, well, that is the fun or it, isn't it?

So much for the bad news. As for the good news: we have none. Here everybody seems to be waiting to see when the new Myarc computer will be working and ready to be shipped to Europe.

As for the rest of Europe. Germany (and Austria) are the strongest market for TI-99/4A. There are several companies that are developing good hardware and software. Most of what is available in Germany is already imported in North America by RYTE DATA of Canada.

France used to be a good country as for TI-99/4A. After all, the faulous "TENNIS" game, by nicesoft, come from Nice, France. There was a French magazain "99 MAGAZINE", from Paris, that used to be pretty good. Unfortunately, it ceased publishing last year. Now we do not hear too much anymore from our cousins on the other side of the Alps.

We do not know what is going on in England. We know the Queen is still kicking and alive (God save Her), but we are afraid that TI-99/4A is dead there. I'll be happy to be wrong on that assumption.

Greece does have some small market, but the seem to have only the console, no disk drive and only a few few memory expansions.

We do not know anything about Spain, aside from the fact that Bill Gronos lives there.

Back to Italy. There is a slow, but steady, shifting of users toward the PC IBM (and compatibles). Each month some friend calls me up and says: "Paolo, I am sorry, but I wanna sell out my system. Can you Help? You see, I have been offered a true PC IBM compatible. It's such a deal... I know, I know, we said we will never give away our beloved TI-99/4A. But you see I simply need it for work. They recently asked us employeees to become PC IBM expert. Our office will be fully equipped with lots of PCs. and I don't want to be the least informed person in my office. C'mon, don't take it so hard, after all, we did not marry TI did we?"

This rap kinda goes on now and then. Boys, does it give me a chilly on my back! Will I be the last survival of an dwindling race?.

If you ever publish this article, I would be glad to receive a copy of that newsletter.

I developed a small assembler routine, named PARTS. It is good to partition the MYARC RAM DISK, and choose the drive number to emulate while in assembler. These functions can be easily performed in Basic by two CALLs provided by Myarc. However, when you are in Assembler, no hints have been given by Myarc on how to perform the same task. I faced this problem. My solution seems to work well. As explained in the source code, it will work also in a running extended basic program, while with normal Myarc calls you can't do that. It is possible to modify the source code, just to change the drive # you are emulating in a running extended basic program. You are free to publish it, if you think it is worth it.

Yours truly,

Paolo Bagnarese
Via J.F. Kennedy 17
20097 San Donato Milanese, Italy
Phone 514.202 (Milan Area Code: 2.
Calling from U.S. dial 011-39-2 first)

KRACKERSNACKS

by Tom Freeman

Retain GRAMS 1 and 2 For Your Own Use

Some users who have loaded Danny Michael's fine new combination Extended Basic and Editor/Assembler modules into their Gram Krackers may wish to preserve the use of TI-Writer at the same time. I had previously loaded GRAMs 1 and 2 with E/A and TI-W respectively, and thus this new program, which uses these two GRAMs to hold the ASSM1 and ASSM2 files for rapid loading, were no longer available. I had already modified these modules to load the files from my RAMdisk, which is also quite rapid, so I did not need Danny's rapid loader. However, I did wish to use the combination and make use of the other enhancements, such as cataloging from E/A and preserving file names.

The following modifications to your FINISHED files will accomplish the task. Essentially, I went to the area of Danny's code where the assembler was loaded from GRAM into CPU, and changed it back to the original E/A code, with some address changes because of the move to GRAM 7, and screen location changes. All the other routines used by E/A to get the program from the disk were preserved.

To accomplish the changes, go to the GRAM KRACKER memory editor (press 5 on GK title screen), then FCTN 1 to get to GRAM memory, FCTN = to get to HEX, enter, and then type in E658. You should see in the memory window code beginning with the following bytes: Ø6 F4 6Ø. Press FCTN 9 to replace the first three lines ofcode with the following bytes between the ¦ marks (where you see ASCII text on the right you can type in ASCII, which saves half the typing - also remember to push the W/P switch to Bank 1 or 2 while you are typing):

```
>E658 ¦ Ø8 8B A1 14 4C 6F 61 64 2Ø 41 73 73 ¦ `****Load Ass'
>E664 ¦ 65 6D 62 6C 65 72 28 59 2F 4E 29 3F ¦ `embler(Y/N)?'
>E67Ø ¦ 2Ø FB Ø6 E7 9F D6 75 ØF 6Ø 5A D6 75 ¦ ` *****u*`Z*u'
>E67C ¦ 4E 6Ø 5A Ø6 E5 B2 E6 28 Ø6 E5 D4 BF ¦ `N`Z****(****'
```

Defaults for Assembler Source Code File

Danny's mods retain separate default areas in GRAM 2 for all the file or device names you input - only those for LOAD and SAVE file in the Editor are the same. I personally wish to have the last file name I used for SAVE in the Editor appear as the default for the Source Code in the Assembler, since I normally assemble source code I have just written and saved. This is easily done by positioning the cursor after the g in the upper left corner, typing F347, then FCTN 9 to get in the memory window. Replace the first byte 4C with 88 (W/P off!).

While you are making changes, you might consider the following:
1) if you are in fact loading the TI-W and E/A utility files from RAMdisk, then you should change the device name/number at gE61E (I use DSK4.) The length should still be 5 bytes.
2) I have also changed the name of the default program name for option 5 Run Program File from UTIL1 to another name. You can do this at gE62D.
3) The format RAMdisk option from Danny's main E/A screen does not work if you have the RAMdisk with MYARC XBasic, because the CALL PART now requires three numbers rather than 2. To make sure you do not choose this option by mistake, go to gEØF8 and change the words "Format RAMdisk" to "Non-valid Key " and change the bytes at gE12D -

E12E from 52 B1 to 40 5A. You will now stay on the menu screen if you hit 7.

BE SURE you have saved your original modified module BEFORE you make the changes. You should now save your newly modified module under a different name. GRAMs 1 and 2 will no longer be used for the ASSM files and you can go back to keeping other modules in this space, so long as the high bytes in GRAM 2 from 5ED4 to 5FFF are not used (Danny uses them to hold the default file names in E/A). Also note that because these 2 GRAMs in the GK are not used, Danny's mods are now also useful in the 56K version of GRAM KRACKER. However the default file names for E/A mentioned above will no longer work; you will always see garbage when you are prompted for a file name. It is easily eliminated with FCTN 3.

Using MSAVE
===== =====

As there are still 2609 bytes of memory free at the top of the E/A in GRAM 7 (from >F5CE on) you can still store a few short Basic programs if you use the following (slightly cumbersome) method:

1) If you are using GRAM 2, save it using Option 4 Load/Save Console from the GK main menu. The third switch must be in the GRAM 1-2 position. Also save the "module" (Menu 2) since we will be clearing the module space. If you have a 56K GK without GRAMS 1-2 see NOTE below.
2) Move the entire contents of GRAM 7 to GRAM 2 (Gram memory - FCTN 1 until a g appears in the upper left corner if it isn't already there, E000 for Start, FFFF for Finish, g4000 for Dest, then FCTN 2 to move).
3) Initialize the module space (Menu 3).
4) Load module (Menu 1) with MSAVE from the original GK utility disk.
5) Go back to the Memory Editor (Menu 5), FCTN 1 to get to G memory, FCTN = for HEX. Press enter, then type in E012. In the memory window you should see E2 B7 E2 B7. Press FCTN 9 to get the cursor in there, then type F5 CE F5 CE (W/P off!). FCTN 9 again, move the cursor back over the memory address and change it to E1DD, FCTN 9 and change this E2 B7 to F5 CE also.
6) Move the 35 bytes at E2B7 to F5CE by entering E2B7 for Start, E2D9 for Finish, and gF5CE for Dest. Then FCTN 2 to move. Put Switch 4 back in W/P position.

This new MSAVE will save Basic programs starting at F5CE, rather than E2B7, leaving enough room for the E/A module. Save it with a new name (such as MSAVE plus your initials) with Menu 2

You may now go to Basic (GRAM 1-2 switch down and Loader OFF), enter your basic programs, and save them by entering CALL MSAVE. When you are done, and quit Basic, you should see them on the main console menu.

Now go back to the GRAM KRACKER, and save module again (using yet another name, just in case). You are now ready for your final modification of GRAM 7.
7) Go back to the GK Memory Editor, FCTN 1, FCTN =, and examine the 2 bytes at E012. This represents the first free address after your programs. Therefore you will want to save all the bytes from F5CE to that address.
8) Making sure that g is in the upper left corner, and 3rd switch is in GRAMS 1-2 position type in F5CE for Start, the bytes you just found for Finish, and g55CE for Dest, and press FCTN 2 to move.
9) The final change is at g4010. This is the address for the next application header after Editor/Assembler and must contain

F5CE. Type it in.
10) Reload the module you saved in Step 1).
11) Move the entire modified contents of GRAM 2 to GRAM 7 by typing 4000 for Start,5FFF for Finish, gE000 for Dest and then press FCTN 2.
12) Save your new "module" with resident Basic programs under a new name. Remember that to USE these Basic programs the loader must be OFF, and switch 3 must be in TI Basic position.

NOTE: If you have a 56K GK, make the follwing changes in above steps:
1) You can't save GRAM 2
2) Move GRAM 7 to GRAM 3 by using g6000 for Dest. NOW clear everything else by a) Start 8000 Finish FFFF, W/P to Bank 1, FCTN 3 (FILL). b) FCTN 1 twice to get to CPU memory, Start 6000, Finish 7FFF, FCTN 3 c) same as b) but with W/P in Bank 2 position d) Save "module" (Menu 2) - this should give you one file on disk e) W/P ON (mid position).
3) to 7) are the same
8) First reload the "module" you saved in Step 2d). Then move the bytes with g75CE as Dest
9) The change is at g6010. BEFORE going to next step, a) Move GRAM 3 to GRAM 7 (Start 6000 Finish 7FFF Dest gE000, W/P to Bank 1, FCTN 2 b) Clear GRAM 3 (Start & Finish the same, FCTN 3) c) W/P ON (mid position) d) Save module - this will give GRAM 7 only.
10) is the same
11) Load the "module" saved in 9d)
12) is the same

All this is not as complicated as it sounds - I just tried to make it as clear as possible.

L.A. 99ER'S OCTOBER 22, 1986 PROGRAM

The October meeting will begin with the President's report. Following, Gail Fair will report on the best bargains from the Marketplace. At 8:00 Fred Moore will deliver the report on the new software in the Club's Library and follow with the series "How I use my TI 99/4A Computer." Fred's topic and demonstration will combine the computer with a video tape recorder.

Following the social break a discussion and vote on the new constitution and by-laws will be held. Anyone who wants a copy BEFORE the meeting please call George Hutton 548-3806 or Barbara Voorhees 832-5500. Copies will be available at the meeting.

Kent Thompson will give a demonstration of the newest product from Thompson Software, the Mutual Fund Manager. Kent will discuss mutual fund management as well as demonstrate the software.

The Club's LOGO contest is underway with Steve Chalcraft accepting entries. The October meeting host will be Fletcher Wicker.

FOR SALE - BEST OFFER
- SEIKOSHA GP-550TI PRINTER MINI WRITER - CASSETTE ONLY
- PARALL AX TI PRINTER INTERFACE
- TI 99/4A COMPUTER

Assorted Software: Terminal Emulator II, Line by line Assembler, Video Graphics, Spelling (level 6), Fractional Numbers, Mind Challangers. Contact: 213 377-2003 Evenings

SIDEWAYS - AGAIN? by Tom Freeman

There have been several comments that my SIDEWAYS program is rather slow - and in XBasic it is! What follows is an assembly language version that in my benchmark test works in about one fourth the time (as fast as the printer could print the graphics). In order to avoid setting up PABs in the assembly code I have interfaced the program with a short XBasic program that does the reading of files from disk and the actual printing. It is also instructive as to the method of calling assembly subprograms from XBasic, and the use of the STRREF and STRASG utilities resident in XBasic.

First the XBasic program (the AL source code follows)

```
1 !SIDEWAYS PRINT PROGRAM WITH ASSEMBLY LANGUAGE SUPPORT
2 !BY TOM FREEMAN
3 !   515 ALMA REAL DR.
4 !   PACIFIC PALISADES, CA 90272
100 OPTION BASE 1
110 DIM A$(60)
120 ON ERROR 1000
130 CALL LINK("SETUP")
140 INPUT "INPUT FILE ":F$ :: OPEN #1:F$,INPUT
150 INPUT "PRINTER ":P$ :: OPEN #2:P$&".CR" :: PRINT #2:
CHR$(27);"A";CHR$(8)
160 FOR X=1 TO 60 :: IF EOF(1)THEN STOPFLG=1 :: CLOSE #1
 :: GOTO 180 ELSE LINPUT #1:A$(X)
170 PRINT X;:: NEXT X
180 IF X=1 THEN 230 ELSE CALL LOAD(9461,X-1)
190 CALL LINK("IN",A$()):: CALL LOAD(9463,0):: CALL PEEK
(9465,F)
200 FOR X=1 TO F :: CALL LINK("OUT",B$,C$)
210 PRINT #2:CHR$(27);"K";CHR$(224);CHR$(1);B$;C$ :: NEX
T X
220 PRINT #2:RPT$(" ",80);CHR$(10);CHR$(10)
230 IF STOPFLG=0 THEN 160 ELSE CLOSE #2 :: STOP
1000 ON ERROR STOP
1010 CALL INIT :: CALL LOAD("DSK1.SIDEWAYS/O"):: RETURN
130
```

Line 130 links to a subprogram in the AL program that sets up data in memory expansion for later use. An error will occur of course if the AL program hasn't been loaded yet, hence the ON ERROR statement in 120 - this calls the subroutine at 1010 which loads the code one time only. Even after the progam has stopped and you run it again, all the AL code is still there, hence there will be no error the second time and the program will run faster. Lines 140-150 request the names of your input file and output device, and open up the files (and change the line feed on the printer to 8/72 in. since each graphic character is only 8 dots high. Lines 160-170 create an array in VDP RAM for 60 input lines at one time. This array will be used by the AL program.

The CALL LOAD in line 180 is for address >24F5, which as you will see below, is the LSB of NUMTDO. This limits the number of times a routine is looped through in the AL code. Finally we CALL LINK("IN"). This routine in AL (see below) uses the array to set up a block in high memory for later use. The CALL LOAD in line 190 sets OUTFLG (see below) to 0, and the PEEK finds out what the maximum line length was (determined in the AL routine) so we don't go down the page too far (i.e. why print 80 lines of graphic characters on the printer, if the last 40 are all blank!).

Lines 200-210 loop through the OUT routine the requisite number of times. Each pass creates two 240 byte strings in VDP RAM for the printer to use for one line. Each line requires 480 dot columns, one byte each, but the maximum length of one string in the computer is 255, so we need two. We can't do all 60 lines at once because there isn't enough room in memory for 60x480 bytes, hence it is easier to do one line at a time.

Finally line 220 prints a solid line to delineate each page from the next (you can eliminate this of course) and then line 230 stops or goes back for more if there is any.

Next the source code, with explanation not contained in the comment field following. It should be typed in with the E/A Editor, and then assembled (use R option only). If you do not have an E/A cartridge to assemble with, this article will be followed by an actual DIS/FIX 80 file you can type in with TI-Writer (use PF option to save, then F DSKx.SIDEWAYS/O). And if you don't have TI-W either, there is also a CALL LOAD version.

```
        DEF  SETUP,IN,OUT
STRASG  EQU  >2010        UTILITY ASSIGNS ARRAY ELEMENT
STRREF  EQU  >2014          "      READS    "      "
VMBW    EQU  >2024        VDP UTILITY
VMBR    EQU  >202C          "     "
STATUS  EQU  >837C
FAC     EQU  >834A
GPLWS   EQU  >83E0
INPBUF  EQU  >A000
OUTBUF  EQU  >A000+4800   BUFFER FOR 60 LINES,80 CHAR EACH
        AORG >24F4
NUMTDO  DATA 0            # OF LINES READ IN
OUTFLG  DATA 0            FLAG TO BEGIN PRINT ROUTINE
MAX     DATA 0            MAX WIDTH OF LINES IN ARRAY
WS      BSS  >20          WORKSPACE
INSTR   BYTE 80           FOR STRREF,MAX LINE LEN.,ACTUAL
        BSS  80            WILL BE READ IN BY STRREF
OUTSTR  BYTE 240          FOR STRASG,LEN WILL ALWAYS BE
        BSS  240           240 (1/2 OF PRINTER LINE)
PRTDEF  BSS  256*8        LOC OF PRINT CODES,8 BYTES FOR
*                          EACH CHAR. 32 TO 126
LEN     BYTE 80           TO REFRESH MAX LINE LEN
SAV11   DATA 0            FOR SAVING RETURN ADDRESS
* SETUP CREATES ALL THE PRINTER CODES IN A BUFFER
SETUP   MOV  R11,@SAV11   SAVE THE RETURN
        LWPI WS           MY WORKSPACE
        LI   R1,256*8     TO CLEAR THE PRTDEF BUFFER,R1 IS
A       CLR  @PRTDEF-2(R1) INDEX REG,ADDED TO START LOCA-
        DECT R1            TION OF BUFFER
        JNE  A
        LI   R0,>400      ASCII 32,START OF PAT.DES.TABLE
        LI   R1,PRTDEF+>100 BUFFER TO STORE IT
        LI   R2,95*8      # OF BYTES TO READ
        BLWP @VMBR        READ FROM VDP TO PRTDEF
        LI   R0,95        # OF 8 BYTE SEQUENCES TO REVERSE
C       MOV  R1,R2        R1 IS START OF this SEQUENCE
        MOV  R1,R3         USE IT IN R2 & R3
        AI   R3,6         SWITCH BYTES 0-1 TO 7-6,THEN 2-3
        LI   R4,2          TO 5-4
B       MOV  *R2,R5       R5 & R6 HOLD THE PAIRS TO SWITCH
        MOV  *R3,R6
        SWPB R5           REVERSE BOTH
        SWPB R6
        MOV  R6,*R2+      NOW MOVE BACK,INCR R2 BY 2(WORD)
```

```
        MOV  R5,*R3       MOVE THE OTHER BACK
        DECT R3           AND DECR R3 BY 2
        DEC  R4           DO ANOTHER PAIR?
        JNE  B            YES
        AI   R1,8         NEXT GROUP OF 8
        DEC  R0           ANOTHER SEQUENCE?
        JNE  C            YES
RETURN  LWPI GPLWS        XB RETURNS NEED TO BE IN GPLWS
        MOV  @SAV11,R11   RETRIEVE THE RETURN ADDRESS
        CLR  R0           INDICATE NO ERROR
        MOVB R0,@STATUS
        RT                AND GO BACK
* IN PUTS THE ENTIRE ARRAY CREATED IN XB INTO BUFFER
IN      MOV  R11,@SAV11   SAVE RETURN
        LWPI WS           MY WORKSPACE
        CLR  @MAX         MAX LENGTH OF INPUT LINE
        LI   R0,INPBUF    THIS & NEXT 5 LINES CLEAR THE
        LI   R1,>2020     INPUT BUFFER, 2 BYTES AT A TIME,
        LI   R2,2400      2400 TIMES (=60)
CB      MOV  R1,*R0+
        DEC  R2
        JNE  CB
        LI   R0,1         FIRST ARRAY ELEMENT
        LI   R1,1         ARGUMENT #1 (THE ONLY ONE)
        LI   R2,INSTR     STRING BUFFER,LEN FIRST
        LI   R3,INPBUF    START OF ENTIRE ARRAY BUFFER
E       MOV  R2,R6        USE R6 SO R2 IS ALWAYS THE SAME
        MOVB @LEN,*R6     MAX LEN ALWAYS 80
        BLWP @STRREF      GET THE ARRAY ELEMENT INTO INSTR
        MOVB *R6+,R4      ACTUAL LENGTH IN MSB OF R4
        SRL  R4,8         LSB
        MOV  R3,R5        CURRENT LOC IN INPBUF
        C    R4,@MAX      WHICH IS BIGGER?PREV MAX OR NOW
        JLT  D            PREVIOUS VALUE
        MOV  R4,@MAX      NEW ONE, REPLACE IT
D       MOVB *R6+,*R5+    MOVE LINE TO INPBUF,1 BYTE
        DEC  R4           ANOTHER?
        JNE  D            YES,GO BACK FOR MORE
        C    R0,@NUMTDO   HOW MANY ARRAY ELEMENTS TO DO?
        JEQ  RETURN       NO MORE,GO BACK TO XB
        INC  R0           NEXT ELEMENT
        AI   R3,80        NEXT BOUNDARY IN INPBUF
        JMP  E            GO FOR MORE
* LOOP THROUGH THIS ROUTINE @MAX TIMES
* CALL LINK("OUT",B$,C$)
OUT     MOV  R11,@SAV11   SAVE RETURN
        LWPI WS           MY WORKSPACE
        MOV  @OUTFLG,R6   FIRST TIME?(WAS SET TO 0 IN XB)
        JNE  F            NO,SKIP INITIALIZATION
        INC  @OUTFLG      INDICATE ALREADY DONE
        CLR  R0           NOT AN ARRAY
        LI   R2,OUTSTR    OUTPUT BUFFER FOR STRASG
        LI   R3,INPBUF+4720 1ST CHAR OF 60th LINE
        LI   R4,OUTBUF    FULL OUTPUT BUFFER START
F       MOV  R4,R6        CURRENT LOCATION IN OUTPUT BUFFR
        MOV  R3,R5          "       "    "  INPUT   "
H       MOVB *R5,R7       CURRENT BYTE IN CURRENT LINE
        SRL  R7,8         TO LSB
        SLA  R7,3         MPY BY 8 (# BYTES IN CHAR DEF)
        AI   R7,PRTDEF    POINT INTO PRINTER DEF TABLE
        LI   R8,8         8 TO DO
G       MOVB *R7+,*R6+    MOVE TO OUTPUT BUFR,1 AT A TIME
        DEC  R8
        JNE  G            MORE TO DO
        AI   R5,-80       LINE BEFORE CURRENT LINE
        CI   R5,INPBUF    PAST 1st LINE?
        JHE  H            NO,GO FOR MORE
        INC  R3           NEXT BYTE LAST LINE,FOR NXT LOOP
        LI   R1,1         ARG #1
        MOV  R4,R7        START OF PRINTER LINE BUFFER
        LI   R8,2         2 ARGUMENTS TO DO
J       MOV  R2,R6        BUFFER FOR STRASG
        INC  R6           PAST LENGTH BYTE
        LI   R5,240       240 BYTES FOR EACH ARGUMENT
I       MOVB *R7+,*R6+    MOVE TO OUTSTR,1 AT A TIME
        DEC  R5           MORE TO DO?
        JNE  I            YES
        BLWP @STRASG      ASSIGN B$ OR C$
        INC  R1           NEXT ARGUMENT
        DEC  R8           MORE TO DO?(THERE WERE ONLY 2)
        JNE  J            YES GO BACK
        JMP  RETURN       NO,GO BACK TO XB
        END
```

The key here is that the way TI has set up character definitions, has already done most of the work for the printer. You may remember that each character definition takes up 8 bytes in VDP memory (the space, or CHR$(32) begins at >400 in the pattern descriptor table. Each byte, or 8 bits, represents one row of the eight rows comprising the definition, the first byte being the top row, and the most siginificant bit is the left side of the row. The printer requires definition by columns, and it also requires 8 bytes. In each coluan the most significant byte is at the top (this is for Epson compatible graphics - the only kind this program works for). Now if you turn each character on its side (clockwise rotation) each row becomes a coluan, and the leftmost bit becomes the topmost, so VOILA, it's done, right? Wrong! The problem is that we want the top row to become the LAST coluan, not the first. So each group of 8 bytes will have to undergo a reversal 1->8, 8->1 2->7 etc.

The routines beginning at SETUP accomplish all this preliminary work. To make the conversions fast I set up a buffer to hold the codes to go to the printer, 8 bytes for each of the 256 possible ASCII codes. Only 32 to 126 are actually used, the rest are filled with 0's (nothing to print) so that any non-ASCII characters in the input file will not mess up the printer. At A the buffer is cleared (never know what's there!) and then the actual pattern descriptor table at VDP >400 is read into the proper area of the buffer. C and B then do the byte reversal. We now have a buffer in which we can index the location of a character definition by multiplying the ASCII number by 8 and then adding to the start of the table. The following 8 bytes will then be the proper ones to send to the printer.

The XBasic program now reads in your file 60 lines at a time (the printer is capable of 480 dot columns, or 60 characters at 8 columns each - as we are going sideways, this represents 60 rows). The lines are read into the array A$(), which resides in VDP RAM. We now go to the routine IN in the source code. The input buffer where the array will be stored is filled with spaces, then the array is read in one element at a time.

This requires a brief explanation of the STRREF utility. R0-2 need to be set up first, with the array element number (0 if a simple variable), the argument number (location after name of subprogram in CALL LINK), and the address in memory where the string is to be placed, respectively. The last entry in this case is INSTR. The buffer must be long enough to contain the longest string, and the first byte must be the maximum length (hence the max length of 255). Each time a string is read in, that

first byte will be replaced by the ACTUAL length - thus each time the utility is used the byte must be reloaded with the maximum. Once these three registers are set up you can BLWP @ STRREF and the string appears in the buffer! STRASG uses exactly the same information, except that you need to set up the buffer first with the string you want to create, with the first byte being the length of the string. Then BWLP @ STRASG and the string will be created in VDP. This routine is used in OUT below.

Back to the AL program. From E to D the input line is obtained and the maximum length kept track of at MAX (remember this was used in line 190 of XBasic program). Now at D the line is moved to the INPBUF storage area one byte at a time, in a regular fashion with each line beginning 80 bytes down the road. After this is done NUMTDO times we return to XBasic.

Now for the key routine at OUT. OUTFLG was set to 0 in XBasic at the beginning of each array printing so that we know to reset the input buffer holding the text. OUTFLG is changed to 1 so that the next 79 times (or whatever is at MAX) we go through the routine, we don't reset the text buffer. Now at H we start picking off one byte at a time from each input line, beginning at the last line since this will be at the left of the printed page. We then go into the table of codes for the printer previously created at PRTDEF. Since each definition for the printer requires 8 bytes, and the table begins at ASCII 0, we need only multiply the ASCII value by 8 and add to the beginning of the table to get the right sequence of 8 bytes. Thus we move the 60 characters of text, 8 printer bytes at a time, to OUTBUF, to create a 480 byte "string." At J to the end we create two strings B$ and C$ of 240 bytes each, to pass back to XBasic by use of STRASG, and then XBasic prints the line. This is done MAX times, and that's it!

I hope this program is both useful to you, and instructive in terms of assembly language programming. Enjoy it.

Following are the DIS/FIX 80 and CALL LOAD versions, that you can type in if you wish, instead of assembling the above source code.

Tom Freeman

```
9 !USE THESE LINES TO ADD OR REPLACE IN XBASIC PROGRAM
10 DATA 80,0,0,0,200,11,46,94,2,224
11 DATA 36,250,2,1,8,0,4,225,38,90
12 DATA 6,65,22,252,2,0,4,0,2,1
13 DATA 39,92,2,2,2,248,4,32,32,44
14 DATA 2,0,0,95,192,129,192,193,2,35
15 DATA 0,6,2,4,0,2,193,82,193,147
16 DATA 6,197,6,198,204,134,196,197,6,67
17 DATA 6,4,22,247,2,33,0,8,6,0
18 DATA 22,237,2,224,131,224,194,224,46,94
19 DATA 4,192,216,0,131,124,4,91,200,11
20 DATA 46,94,2,224,36,250,4,224,36,248
21 DATA 2,0,160,0,2,1,32,32,2,2
22 DATA 9,96,204,1,6,2,22,253,2,0
23 DATA 0,1,2,1,0,1,2,2,37,26
24 DATA 2,3,160,0,193,130,213,160,46,92
25 DATA 4,32,32,20,209,54,9,132,193,67
26 DATA 136,4,36,248,17,2,200,4,36,248
27 DATA 221,118,6,4,22,253,136,0,36,244
28 DATA 19,206,5,128,2,35,0,80,16,233
29 DATA 200,11,46,94,2,224,36,250,193,160
30 DATA 36,246,22,9,5,160,36,246,4,192
31 DATA 2,2,37,107,2,3,178,112,2,4
32 DATA 178,192,193,132,193,67,209,213,9,135
33 DATA 10,55,2,39,38,92,2,8,0,8
34 DATA 221,183,6,8,22,253,2,37,255,176
35 DATA 2,133,160,0,20,241,5,131,2,1
36 DATA 0,1,193,196,2,8,0,2,193,130
37 DATA 5,134,2,5,0,240,221,183,6,5
38 DATA 22,253,4,32,32,16,5,129,6,8
39 DATA 22,244,16,150,256
1010 CALL INIT
1020 X=11868
1030 READ A :: IF A=256 THEN 1040 ELSE CALL LOAD(X,A):: X=X+1 :: GOTO 1030
1040 CALL LOAD(9460,0,0,0,0,0,0):: CALL LOAD(9498,80):: CALL LOAD(9579,240)
1050 CALL LOAD(4096*4-24,79,85,84,32,32,32,47,26,73,78,32,32)!HALF OF REF/DEF TABLE
1060 CALL LOAD(4096*4-12,32,32,46,190,83,69,84,85,80,32,46,96)!OTHER HALF
1070 CALL LOAD(8196,63,232)
1080 RETURN 130
```

```
00000SIDEWAYS924F4B0000B0000B0000924FA9251AB5000925 1B9256AB00F07F339F    0001
9256C9265C92E5CB5000B0000BC80BB2E5EB02E0B24FAB02 01B0800B04E17F291F      0002
92E6EB265AB0641B16FCB0200B0400B0201B275CB0202B02F8B0420B202C7F2C4F       0003
92E84B0200B005FBC081BC0C1B0223B0006B0204B0002BC152BC193B06C57F2C9F       0004
92E9AB06C6BCC86BC4C5B0643B0604B16F7B0221B0008B0600B16EDB02E07F272F       0005
92EB0B83E0BC2E0B2E5EB04C0BD800B837CB045BBC80BB2E5EB02E0B24FA7F201F       0006
92EC6B04E0B24F8B0200BA000B0201B2020B0202B0960BCC01B0602B16FD7F2C0F       0007
92EDCB0200B0001B0201B0001B0202B251AB0203BA000BC182BD5A0B2E5C7F2CBF       0008
92EF2B0420B2014BD136B0984BC143B0804B24F8B1102BCB04B24F8BDD767F27CF       0009
92F08B0604B16FDB8800B24F4B13CEB0580B0223B0050B10E9BC80BB2E5E7F26DF       0010
92F1EB02E0B24FABC1A0B24F6B1609B05A0B24F6B04C0B0202B256BB02037F27AF       0011
92F34BB270B0204BB2C0BC184BC143BD1D5B0987B0A37B0227B265CB02087F282F       0012
92F4AB0008BDDB7B0608B16FDB0225BFFB0B0285BA000B14F1B0583B02017F26FF       0013
92F60B0001BC1C4B0208B0002BC182B0586B0205B00F0BDDB7B0605B16FD7F299F       0014
92F76B0420B2010B0581B0608B16F4B10967F849F                                0015
62E60SETUP 62EBEIN    62F1AOUT   7F842F                                  0016
:       99/4 AS                                                          0017
```

DM1000-CONFIGURE LIST DEVICE

BY DON BROUILLARD

If you are fortunate enough to have the DM1000 disk from our PUNN library, and have been using it, you are probably as impressed with its capabilities as I, and have probably relegated your Disk Manager II module to "Never Never Land". I have been using the DM1000 program for a short period of time and can print the catalog in a condensed format that is very easy to read and does not completely cover your disk or its jacket. I struggled with this problem until I realized how simple it was to accomplish this.

If you follow the comments below, you will have a permanent program on your DM1000 disk that will print out a catalog in a condensed format for each of your DM1000 formatted disks, with but a single keystroke of your console.

The primary instructions are on page 17 of the documentation for DM1000. If you follow these instructions, the only problem encountered is "what control codes do I enter?" If you have an EPSON, TI or GEMINI 10/15 printer, the answer is: 15 27 71 27 48 8. You can enter up to 30 control codes, but these codes do the trick. Be sure to separate each control code with one (1) space and when you have finished entering your control codes, enter ONE MORE SPACE followed by an asterisk (*) and press enter.

After you have done the above, RETIRE your Disk Manager (oops, MANAGER!) module and when you want a condensed print out of your catalog, hit FUNCTION 7 and enjoy!

Reprinted from MICROPLAY, VOL V, NUMBER 4, APRIL 1986 (PUNN Users Group Newsletter)

==========From the PACIFIC*BELL Co==========

[Important if your trying to go on line...]
HOW TO PUT "CANCEL CALL WAITING" TO WORK.
Step 1: Lift reciever, listen for a dial tone
Step 2: Dial *70 (Touch-Tone phone)
1170 (rotary dial phone)
Step 3: Wait for 2nd dial tone and make call.

To reactivate Call Waiting, just hang up or call another number. Any questions, call your Pacific Bell Business Office.

C!

MERGE THAT FILE

From CALL SAY (Grand Rapids 99'ers)

Without reproducing the entire article, here is a discovery by Jack and BJ mathis of the southwest Ninety-niners of Tuscon Az

While working on a program they started to get error messages where there were none only a short time before. They tried a backup XB cart ridge, even a backup 99/4A system. Nothing seemed to work.

"I vaguely reseaberd something about the way the CPU stacks the programs, by putting the last line number entered on top of the stack. The MERGE command reshuffles the program lines back into proper order. So, I saved the program in MERGE.format, typed NEW, and MERGEd te program back in. Then I RESequenced again. No more error codes. It also shortened the program file. (less linkage)."

I have tried this on a number of programs that I have written or worked on and it does seem to help. If the program lines are in order, the computer does not have to wait while it's finding the next line number - as is the case when lines have been added out of sequence. If you try this technique, please report your findings.

========Grand Rapids Area "CALL SAY"=======

WARNING!! Beware of a program floating around the country's BBS's called SUPERTRACK. What appears to be a track copier is actually a diskeater...I was suspicious at first because it instructs you to remove the write-protect tape from your master disk. If used, whatever is on your disk enters Byte Heaven...and I'm sure the action the heads are getting is doing them no good also. I've heard of simular programs for IBM, but this is the first I've seen for the IT...WATCH THOSE TRACK COTIES!!!

<*><*><*><*><*><*><*><*>

If YOU have any "I Didn t Know That!" contributions or stoeies, send them to:
Chick De Marti
P.O.Box 3547
Gardena CA 47247-7247

Send em in any shape or form, I ll use it!

DISK DRIVE SPECIFICATIONS
VERSION 1.1, SEPTEMBER 12, 1985
by Louis Guion, Startext 77536

MANUFACTURER	MODEL NUMBER	HIGH	SIDE DENS	TPI	BYTES	5 V PWR	12V PWR	ACCES TIME	MOTOR DRIVE	COMMENT
AlpsElectric	FDD2225	1/2								
Canon	MDD211	1/2	DSDD	48	360K					
C.D.C.	9409	Full	DSDD	48	360K					
C.D.C.	9428	1/2	DSDD	48	360K				Drect	
Epson	SD521	1/2	DSDD	48	360K	.4A	.4A	6MSEC	Drect	O.K. in PBox
Hitachi	HFD505B	1/2								
Matsushita	JA551	1/2								
Matsushita	JA5551-2	1/2								
Micropolis	1115V	Full	DSQD							
Mitsubishi	M4851	1/2	DSDD	48	360K					
Mitsubishi	M4853	1/2	DSQD	96	720K	.5A	.7A			
MPI	B51	Full	SSSD	48	90K				Belt	Sold in PBox
MPI	B52	Full	DSDD							
MPI	501C-200	1/2								
MPI	502B-100	1/2	DSDD							
National	JA551-2	1/2	DSDD	48	360K					
Panasonic	JA551-2	1/2	DSDD	48	360K			6MSEC		
Qumetrack	142	1/2	DSDD	48	360K				Belt	Hi Pwr Reqmt
Qumetrack	142LX	1/2	DSDD	48	360K					
Qumetrack	542	Full		48						
Remex	RFD480	2/3	DSDD	48	360K				Drect	
Sanyo	FDA52008/PC	1/2	DSDD	48	360K					
Sanyo	SM548D	1/2	DSDD	48	360K			6MSEC	Drect	
Shugart	400L	Full	SSSD	48	90K				Belt	Sold in PBox
Shugart	SA455	1/2	DSDD	48	360K	.6A	.6A	6MSEC		O.K. in PBox
Shugart	SA465	1/2	DSQD	96	720K					
Shugart	SA475	1/2		96	1.6M					For the "AT"
Siemens	FDD100-5	Full	SSSD	48	90K				Belt	Sold in PBox
Tandon	TM50-1	1/2	SSSD							
Tandon	TM55-2	1/2	DSDD	48	360K			6MSEC		
Tandon	TM55-4	1/2	DSQD	96	720K					
Tandon	TM65-2L	1/2								
Tandon	TM100-1	Full	SSSD	48	180K				Belt	
Tandon	TM100-2	Full	DSDD	48	360K				Belt	
Tandon	TM101-4		DSQD							
TEAC	FD55A	1/2	SSSD		180K			6MSEC		
TEAC	FD55B	1/2	DSDD	48	360K	.4A	.3A	6MSEC	Drect	O.K. in PBox
TEAC	FD55BV-06	1/2	DSDD	48	360K			6MSEC	Drect	No Hd Ld Sol
TEAC	FD55E	1/2	DSQD	96	500K			3MSEC	Drect	
TEAC	FD55F	1/2	DSQD	96	1M			3MSEC	Drect	
TEAC	FD55GFV-AT	1/2	DSQD	96	1.2M					For the "AT"
TEC	FB503	1/2	SSSD	48	90K				DRECT	2-O.K. IN PBOX
Toshiba	5401		DSDD							
Toshiba	ND04D	1/2								
Toshiba	ND040T	1/2	DSDD							
Y.E.Data	YD580	1/2								

This information is intended to help TI-99/4A users in identifying disk drives that may be compatible with thier Peripheral Expansion Boxes and with their present disk systems. Since all information had been garnered from vendor advertisements, it is assumed to be correct, but must, none-the-less be used with caution due to transcription and other typographical errors.

If any reader can in any way add to the information presented, please do so by contacting the author at Startext MC 77536. Your help is appreciated!

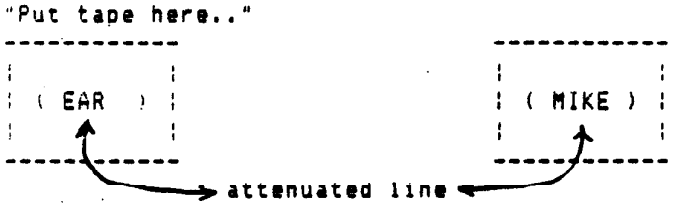
(Recopied from BAYOU 99er Newsletter)

Did you know that...?

by Chick De Marti

(This article has been in my files a while.)
(I don t recall who the author is.)

********** IF CASSETTE WON'T LOAD **********



Set VOL. & TONE to Half/way on both. Start your's in record and borrowed one in play.

**********THAT IS ALL!**********

[thanx JMS of the BOYOU BYTE]

If you don't have a disk in your drive, DON'T CLOSE THE DISK DOOR OR LATCH. This can cause the read heads to chip, which could later damage your disks.

==========Thanx NEWJUG North==========

From the Guilfoed, N.C. UG...DSDD drives are available (Tandon and CDC fullhight) from Janick Data,1869 Riverbirch Dr.,Sumter, SC 29150. phone (803)481-9205 for $49.95. SSDD for $34.95 plus $5 shipping.

<(*)><(*)><(*)><(*)><(*)><(*)><(*)>

[Author unknown]

Most Shugart disk drives that were sold for TI P.E. box are SS/DD drives and just by getting a CorComp controller you can double your storage without adding another drive!!!

<(*)><(*)><(*)><(*)><(*)><(*)><(*)>

==========Thanx Houston User's Group==========

The following program enables you to <LIST> programs in the condenced mode on your Gemini or Epson printers. The same can be incorperated in any program that will require a printed line longer then 80 characters.

```
100 CALL CLEAR
110 OPEN #2:"PIO".VARIABLE 140
120 PRINT #2:CHR$(15);
```

<(*)><(*)><(*)><(*)><(*)><(*)><(*)>

[From an article in the ROM Newsletter]
by Jim Swedlow

When Disk Manager II formats a disc, it verifies each section...(you knew that). What was new to me was that if it finds a bad sector, DM2 locks it off. This allows you to use the disc, with slightly less storage space.
[Source: a letter in MICRO-pendium]

<(*)><(*)><(*)><(*)><(*)><(*)><(*)>

WORKING WITH LARGE TEXT FILES

To work with a Display/Variable 80 file in TI-Writer that is too large to fit in the buffer, break it into smaller pieces in the following manner:

1. Load TI-Writer Editor
2. Go to command mode (FCTN 9)
3. Enter "LF" (Load File)
4. Enter "1 500 DSK1.filename" where "filename" is the name of the large file. This loads the first 500 lines of the file.
5. Print as a file, or save back to disk as a unique filename
6. Repeat step 3 and 4, but use "501 1000 DSK1.filename"
7. repeat as necessary

KIDS ##########

REMARKS

CHOPPER

by Jim Woodworth

This clever program comes from th e AVIT newsletter . It was written by one of their NEWER MEMBERS!! ("Note the whirling blades! (ED)"

```
10 CALL CLEAR
20 CALL CHAR(33,"0000000000030000")
30 CALL CHAR(64,"000000000FF0000")
40 CALL CHAR(35,"000000000FF40E0")
50 CALL CHAR(94,"0000000000000008")
60 CALL CHAR(37,"0709113F3F1F82FF")
70 CALL CHAR(38,"FC0E0F0F0FFE10FF")
80 CALL CHAR(42,"0000FFFF000000C0")
90 CALL CHAR(36,"1C3CFCFC00000000")
100 CALL CHAR(63,"0000000000000000")
110 CALL VCHAR(12,16,38)
120 CALL VCHAR(12,15,37)
130 CALL VCHAR(12,17,42)
140 CALL VCHAR(12,18,36)
150 CALL VCHAR(11,18,94)
160 CALL VCHAR(11,14,33)
170 CALL VCHAR(11,15,64)
180 CALL VCHAR(11,16,35)
190 CALL VCHAR(11,17,64)
200 CALL VCHAR(11,14,63)
210 CALL VCHAR(11,15,63)
220 CALL VCHAR(11,16,63)
230 CALL VCHAR(11,17,63)
240 CALL SOUND(135,-4,1)
250 GOTO 160
```

If you are using X/Basic try adding this little touch...

To line 10 add :: CALL SCREEN(5)

```
   add 152 FOR I=1 TO 15
       154 R=INT(RND*180)+10 :: IF
       (R>70)*(R<110)THEN 154
       156 C=INT(RND*180)+10 :: CAL
       L SPRITE(#I,46,15,R,C,0,+15)
       NEXT I
```

(This little addition is not intended as an improvement to the program but rather a demonstration to the beginner of how to play around with other programs to improve your own skills.

(Chick)

This program will show a helicopter near the center of the screen and gives the appearnce and sounds of the blades rotating. Looking at the program you can see lines 110 through 150 draw the plane while the lines 160 through 230 draw the blades and tower. Line 250 sends the program back to 160 to repeat the blade and tower sequence.

FORTH

The next three screens were written by Howie Rosenberg (back in 1984)but they still contain plenty of material in study. The first will initilize a a disk double-sided or for a FORTH screen disk in 35 seconds, much faster then DMII. It requires the -COPY and -SYNONYMS options to be loaded. If they are pre-loaded from a BSAVEd load, then remove the -SYNONYMS and SCOPY directives in line 1. If not loaded when you boot FORTH, then make sure the FORTH systems disk is in drive one when you load this screen. Once loaded, the word INITDISKDS will prompt you to have a disk in drive 2 for initialization; when you press any key, the initialization process will begin. Change " HOWIE " in line 5 to whatever you want to call the disk. The word SETINIT formats a DS disk in drive 2 for FORTH, also in about 35 seconds. If you want SS/SD use the screen below...the word INITFORTH sets up a SS/SD FORTH disk; INITDISK a SS/SD disk...again, change the name!

```
SCR #40
  0 ( DISK INITALIZER - DS/SD or FORTH - Howie Rosenberg 1984 )
  1 -SYNONYMS  -COPY  BASE->R  HEX
  2 : SETINIT2 ." Place Disk in drive 2 and press any key "
  3       34 GPLLNK KEY DROP B4 DISK_SIZE !
  4       168 DISK_HI ! 2 102 -7CB0 ! 12 SYSTEM 0 DISK_LO ! ;
  5 : INITDISKDS SETINIT2 DR1 0 CLEAR 0 BLOCK DUP !" HOWIE "
  6       DUP  A +  2DO SWAP !
  7       DUP  C +  944 SWAP ! DUP E + 5348 SWAP !
  8       DUP 10 + 2028 SWAP ! DUP 12 + 0201 SWAP !
  9       DUP 14 + 24 0 FILL DUP 38 + 0300 SWAP SWAP ! DUP 3A
 10       + 58 0 FILL DUP 92 + 6E FF FILL 100 + DUP 100
 11       00 FILL 100 + 200 E5 FILL FLUSH DR0 2 57 -7CB0 !
 12       180 DISH_HI ! 54 DISK_SIZE ! ;       R->BASE
 13
 14
 15

SCR #41
  0 ( DISK INITIALIZER - SS/SD - Howie Rosegberg 1984 )
  1 ( REQUIRES -SYNONYMS AND -COPY )    BASE->R  HEX
  2 : SETINIT ." Place disk in drive 2 and press any key "
  3       34 GPLLNK KEY DROP 1 FORMAT-DISK 0 DISK_LO ! ;
  4 : INITFORTH SETINIT DR1 DISK-HEAD DR0 ;
  5 : INITDISK  SETINIT DR1 0 CLEAR 0 CLEAR 0 BLOCK DUP
  6       !" HOWIE      " DUP A + 168 SWAP ! DUP C + 944 SWAP
  7       ! DUP E + 5348 SWAP ! DUP 10 + 2020
  8       SWAP ! DUP 12 + 0101 SWAP ! DUP 14 + 24 0 FILL
  9       DUP 38 + 0300 SWAP ! DUP 3A + 2B 0 FILL
 10       DUP 65 + 9B FF FILL 100 + DUP 100 00 FILL
 11       100 + 200 E5 FILL FLUSH DR0 ;
 12
 13
 14
 15 R->BASE
```

This next screen (located in an article of MOODY'S FORTH) will format a FORTH "PROGRAM" disk with the option of including error screens. It too is a creation of Howie Rosenberg. And just to complete the thought...screen #43 is a CLONING ROUTINE...courtesy of the COMPUTER BRIDGE (Vol.3, Num.12, December 1984). Note that the entire routine is written on line 5 ! P.S. If you haven't predefined PAGE, include on your welcome screen (Scr.#3) : PAGE 0 0 GOTOXY CLS ;

See you next month... Chick.

```
SCR #42
  0 ( PROGRAM DISK INITIALIZATION ) BASE->R DECIMAL
  1 : KEY$ CR ." and Press any key. " KEY DROP ;
  2 : CLEAR-IT DISK_SIZE @ 0 DO I CLEAR LOOP FLUSH ;
  3 : INIT! PAGE
  4       ." Insert blank disk in drive one"  CR
  5       ." Insert FORTH system disk in drive two"
  6    KEY?  0 FORMAT-DISK CLEAR-IT DISK-HEAD ;
  7 : CHOICE PAGE ." Install error screns Y/N ?" KEY CR
  8       78 + IF PAGE ABORT ENDIF DROP ;
  9
 10 : INSTAL-ERRS PAGE
 11       ." Write error screens to Initialized disk" KEY? CR CR
 12       DECIMAL 94 4 SCOPY  95 5 SCOPY ;
 13
 14 : DISK-INIT INIT! CHOICE INSTALL-ERS PAGE ABORT ;
 15 R->BASE
```

```
SCR #43
  0 ( DISK CLONING ROUTINE - DIRECTOR ACCESS - FS99 01AUG84 )
  1 ( 33 LOAD  39 LOAD ) 0 DISK_LO !
  2
  3 : EX   11 21 GOTOXY ." CLONE COMPLETED...  " CR QUIT ;
  4 : SB    9 18 GOTOXY ." CLONING DISK BLOCK "  3 U.R   ;
  5 : DK   DISK_SIZE @ 0 DO I DUP SB DISK_SIZE @ + I SCOPY LOOP EX ;
  6
  7 CLS    10 1 GOTOXY ." DISK CLONING ROUTINE"
  8        10 2 GOTOXY ." ====================="
  9         3 5 GOTOXY ." Remove system disk from drive one"
 10         8 6 GOTOXY ." and insert *BLANK* disk"  KEY DROP
 11        11 9 GOTOXY ." << FORMATTING DISK >>" 0 FORMAT-DISK
 12        1 12 GOTOXY ." Insert *MASTER* disk in drive two"
 13 KEY DROP CR CR DK CR QUIT
 14
 15
```

(NOTE: On SCR #42 ... if you write the error screens, you will need to put the FORTH system disk in drive #2 or make the following changes.

```
: INSTAL-ERRS  PAGE
     ." Place FORTH system diskette in drive 1"  KEY? CR CR
     4 BLOCK UPDATE  5 BLOCK UPDATE
     ." Place Initializes blank disk in drive 1"  KEY? FLUSH ;
```

This will let it write the error screens if you have only one drive.

NEW ADDS FOR OCT.

10/1/86

S/N	NAME	T	C	SEC	DON	CYAR	REMARKS
2098	UTILITIES #7	E	S	232	JF	YA7	$5.00 XBASIC-BY JERRY HOUGH-SHOPPING LIST,STRANDED,XMAS-TREE,CALENDAR,PRINTER
2101	MUSIC DISK #34	E	N	306	SDP	YA8	$5.00,X/B-DIGITAL PLAYS SONG ON A PIANO,COMPOSER,ADD WORK & PRINT STAFF
2102	BIBLE	W	S	7/D	JH	CYA8	$20.00 7 DISKS,4590 SECTORS,DS/SD-OF THE NEW TESTAMENT-DIS/VAR 80 FILES
4101	CATALOG LIBRARY	A	S	136	JH	YA8	$2.00 FREEWAY BY MARTIN KNOLL-CATALOG DISKS,ADD,DELETE,LIST,SEARCH,PRINT,SORT
4102	UTILITIES #10	X	F	316	REG	YA8	$2.00 FREEWARE BY REGENA,BASIC,X/B-10 EDUCATIONAL PROGRAMS,TYPING,MATH,MUSIC
4103	MUSIC DISK #33	A	F	171	RM	YA7	$2.00 FREEWARE BY ROMAN MAJER,E/A-#3,FOUR POP MUSIC SONGS FROM GERMANY
4104	ARCAIVER	E	F	33	BAT	YA9	$2.00 FREEWARE BY BARRY TRAVER,X/B-STORE AND RESTORE ANY COMBINATION OF FILES
4105	TOUCH PRINT	E	F	314	DRS	A8	$2.00 FREEWARE BY DAVID SAGERS,X/B-PRINTER COMMANDS FOR 7 TYPE OF PRINTERS

DISKS OF THE MONTH FOR OCT 1986

HALF PRICE SALE FOR LA99 MEMBERS ONLY
HALF PRICE FROM SHOWN DISK INCLUDED

MUSIC MUSIC MUSIC

2034 MUSIC #1 $5.00 BASIC, FROM SFV USER GROUP, AMERICAN THE BEAUTIFUL, MY DARLING CLEMENTINE, DECK THE HALL, DEMO #1, DOG GONE BOOGIE WOOGIE, FIDDLER ON THE ROOF, THE GODFATHER. THE ENTERTAINER, THE MUSIC MAKER, MASH TI ORGAN, REELING' AND ROCKIN', SILENT NIGHT, STAR TREK

2035 MUSIC #2 $5.00 XBASIC,FROM SFV USER GROUP, PRAELUDIUM II, VARIATIONS ON A THEME, DANIEL, EAR TRAINING, SILENT NIGHT, SCHOOL DAYS, THE ENTERTAINER, VIENNA WOODS, AULD LANG, FIDDLE, AMAZING GRACE, MIDNIGHT IN A MADHOUSE

2045 MUSIC #3 $5.00 XBASIC,FROM TIGER CUB, AMAZING GRACE, WE HAVE NO BANANAS, FOREVER BLOWING BUBBLES, BUT YOU KNOW I LOVE YOU, CARALINA MOON, COLUMBIA GEM OF THE OCEAN, GREENSLEEVER, HOME IN DREAMS, JUST THE WAY YOU ARE, HOUSE OF THE RAISING SUN, SHENANDOAH, SOLO, UNDERTTHE DOUBLE EAGLE

2048 MUSIC #4 $5.00 BASIC,BY KEN GILLAND, BROWN EYES, CLOSE TO YOU, DAISY, LOHENGRIN, MADHOUSE, MONKEY BUSINESS, PIPELAND, REELING AND ROCKING, SCHOOL DAYS, THIRTY DAYS

2049 MUSIC #5 $5.00 XBASIC,BY SAM MORE JR.#1, BIG CAT BOOGIE, BOAT SONG, DOG GONE, KANGRAROO, MAIN SCREEN, MAPLE LEAF, PUPPY TOWN, ROBOT BOOGIE, SNOW SCENE, SUNDAU DRIVE, VARIATIONS, VENUS, WESTERN BOOGIE

2050 MUSIC #6 $5.00 XBASIC,BY SAM MOORE JR.#2, BUMBLE BOOGIE, GUITAR, MORNING, NOCTURNE, OPUS 23, OZ MEDLEY, RONDO, SEA BOTTOM, SENORITA, LOVE IS A SPLENDORED THING

2051 MUSIC #7 $5.00 XBASIC,BY SAM MOORE JR.#3, A 5TH OF BEETHOVEN, BERCEUSE, AMAZING GRACE, JUST THE WAY YOU ARE, KILLING ME, BOGGIE DOGIE DOGIE, TIME IN A BOTTLE, WITH LOVE IN MY HEART, YESTETDAY, YOU LIGHT UP MY LIFE,

2052 MUSIC #8 $5.00 XBASIC,BY SAM MOORE JR.#4, ALBUM LEAF, BUGLE BOOGIE, SONSTA IN C MAJOR, FOREST ROSES, IN THE MILL, MASH 4077, MOON LIGHT, OPUS DE SILENCIA, WITCHES DANCE

2056 MUSIC #9 $5.00 XBASIC, BY "MR.C", A TASTE OF HONEY, MINUET IN G MAJOR, OLD BLACK JOE, THE LADIES OF CALCUTTA, 5 FOOT 2 EYES OF BLUE, MM DEMO

2016 MUSIC #10 $5.00 XBASIC,BOAT SONG, MAIN SCREEN, ORGAN, PUPPY TOWN, ROBOT BOOGIE, VENUS LANDSCAPE, WESTERN BOOGIE

2017 MUSIC #11 $5.00 XBASIC, BY BILL KNECHT , THE STAR SPANGLED BANNER, SINK THE BISMARK, BLUE DANUBE WALTZ, BUT YOY KNOW I LOVE YOU, CAN'T HELP FALLING IN LOVE, COOL WATER, COULD I HAVE THIS, DANCE, DOODLE-DEE-OOF-DEE DOO, FOOLTIES, G'SLULLABY, MANDY, DEMO, MAKER, SOUND OUT, SUNFLOWER SLOW DRAG

2074 MUSIC #12 $5.00 XBASIC,BEST SONGS BY BILL KNECHT, MR BOJANGLES, O CANADA, DON'T FALL IN LOVE WITH A DREAMER, WINGS OF A DOVE, ENDING, HOUSTON, LOOKING FOR LOVE, PEACE IN THE VALLEY, WEDDING SONG,

2041 MUSIC #13 $5.00 BEST HYMNS BY BILL KNECHT, ABIDE BY ME, BLESSED ASSURANCE, JESUS LOVE THE LITTLE CHILDREN, JUST A CLOSER WALK WITHY YOU, ETETNAL FATHER, BELIEVE, HOLY HOLT HOLY, JESUS SAVE, JUST AS I AM, THE LORD PRAYER, LOVE LIFTED ME, I NEED THEE EVERY HOUR, OLD TIME RELIGION, THE OLD RUGGRD CROSS, ROCK OF AGES

2093 MUSIC #14 $5.00 AXEL F, HARRIGAN, LOHENGRIM, TEXAS STSTE HYMN, TOCCATAIN D MINOR, VALENTINE DAYS SPECIAL

2094 MUSIC #15 $5.00 NEW KID IN TOWN, GHOST BUSTERS, IF I FELL, MATILDA(SPEECH), CLOSE TO YOU(SPEECH)

2240 MUSIC #16 $5.00 FROM AMNION, AMERICA THE BEAUTIFUL, BACH, BACH #3 MINUET, BACH'S MINUET IN B FLAT, BEWITCHED, DEMO #1, GODFATHER, MUSICAL KEYS, M*A*S*H, RHYTHM, MUSICAL SCALES, THE STRING, STRAUSS, LET ME CALL YOU SWEETHEART

2241 MUSIC #17 $5.00 FROM AMNION, BACH MINI CONCERT, THEME FROM DALLAS, MUSIC DEMO #2, MUSIC DEMO #3, FIDDLER ON THE ROOF, INTERVALE, NEVER ON SUNDAY, PLAYER PIANO, SONG, THE SWEETHEART TREE

2242 MUSIC #18 $5.00 FROM AMNION, 12 DAYS OF CHRISTMAS, ALLEY CAT, DUET SPAGNOLETTO, FOREST ROSES, INCREDIBLE HULK, INVENTION IN F, INVENTION BACH, I'M LOOKING THROUGH YOU, MICHAEL'S THEME, MUSIC BOX DANCERS, ORGAN, PENNY LANE, SONATA IN C MAJOR, STAR TREK, CHRISTMAS

2243 MUSIC #19 $5.00 FROM AMNION, ALBUM LEAF, BERCEUSE, BUGLE BOOIE, DOG GONE BOOGIE WOOGIE, RAINBOW CONNECTION, FOREST ROSES, SWINGING SHEPHERD BLUES, GIVE A LITTLE WHISTLE

2244 MUSIC #20 $5.00 FROM AMNION, HARK THE HERALD ANGELS, BEETHOVER'S 5TH, AMAZING GRACE, GUITAR, WITH LOVE IN MY HEART, KILLING ME SOFTLY, IN THE,MILL, MOONLIGHT, YOU LIGHT UP MY LIFE, TIME IN A BOTTLE, WITCHES DANCE

2245 MUSIC #21 $5.00 FROM AMNION, BEETHOVEN'S 9TH SYMPHONY, BUMBLE BOOGIE, BOOGIE OOGIE OGGIE, BUNNY MUSIC, COLOR, GUITAR TUNER, SOUND GENERATOR, STAIRWAY TO HEVEN, MORNING, MUSIC MAKER, MUSIC TERM QUIZ, OP 23, PRELUDE, INSTRUMENT TUNER, WALTZ BY CARULLI

2246 MUSIC #22 $5.00 FROM AMNION,THREE KINGS, AMERICAN, ANCHORS AWAY, HAPPY BIRTHDAY, THE MUSIC CREATOR, O COME ALL YE FAITHFUL, GUANTANAMERA, FUGUE BY HANDEL, A HUNTING WE WILL GO, PRERE JACQUES, OLD MAC DONALD, PLAY TYPE, BACH RECITAL, ROCK AROUND THE CLOCK, SYRINX, YELLOW ROSE OF TEXAS, POP GOES THE WEASEL, YANKEE DOODLE DANDY, ZITHER

2247 MUSIC #23 $5.00 FROM AMNION, JINGLE BELLS, A HUNTING WE GO, JOY TO THE WORLD, THE POPCORN MAN, MINIRACH CONCERT, ZIGGY'CHRISTMAS, MY HUNGERY HEART, PRELUDE IN G MINOR, POLONAISE IN G MINOR, ACROSS THE FIRLD, VIOLA CONCERTO IN G, VIOLIN TUNER, COLOR BARS, MUSIC WORKSHET, VIBRATO ORGAN, SCALES

2248 MUSIC #24 $5.00 FROM AMNION, THE COVENTRY CAROL, RED RIVER VALLEY, TWINKLE TWINKLE LITTLE STAR,ADESTE FIDE LES, 12 DAYS OF CHRISTMAS, SOUND EFFECT, MY OLD KENTUCKY HOME, THE CHRISTMAS CAROL, COMPUTER CHRISTMAS CARD, HAS ANYBODY SEEN MY GAL, SARABANDE BY HANDEL, THE INCREIBLE HULK, THE PIANO COMPOSER, ROE ROW ROW YOUR BOAT, TXU SONG, THE HIGHY AND THE MIGHTY

2249 MUSIC #25 $5.00 FROM AMNION, CHURCH CONCERT, JAM SESSION, BEATLES COLLECTION, THE ENTERTAINER, GREENSLEEVES, HILL STREET BLUES THEME, MUSI-KEYS, PUFF THE MAGIC DRAGON, FROSTY THE SNOWMAN, TWO NOTE MELODY, CONSTANTE, COUNTRY DANCE, SILVER AND GOLD, SONGS OF TEXAS, BANJOS, HOME IN DREAM

2250 MUSIC #26 $5.00 FROM AMNION,KOJO NO TSUKI, NADIA'S DREAM, AMERICA II, HEART, MOZART, IOWA FIGHT SONG, WHAT A FRIEND IN JESUS, MOZART-RONDO A LA TURCA, FROGGY MOUNTAIN BREAKDOWN, SATIE-GYMNOPEDIE #3, SCARLATTI-SONATA, CLOSE ENCOUNTERS, HAVE A HOLLY JOLLY CHRISTMAS, HORNPIPE BY PURCELL

2251 MUSIC #27 $5.00 FROM AMNION, RUDOLPH II, 59 STREET BRIDGE, RINGO'S THEME, BACH TOCCATA FUGUE, TAKE FIVE, ADELITA de TARREGA, LAGRIMA, RAMANCE DE CASTILLA, TRANSPOSITION TABLES, LITTLE DRUMMER BOY, HELLO/GODBYE, HEY JUDE, YOU'VE GOT TO HIDE YOUR LOVE, LET IT BE, SLEIGH RIDE, LET IT SNOW, KINS WILLIAM?S MARCH

2252 MUSIC #28 $5.00 FROM AMNION, ROCKY ROBOT'S BOOGIE, ROCKING' AROUND THE CHRISTMAS TREE, THE CHRISTMAS SONG, COMPUTORGAN, VENETIAN BOAT SONG, TI ORGAN, PUPPYTOWN, VENUS NIGHT RIDE, WESTERN BOOGIE, DOUBLE EAGLE RAG, IWOA STATE SONG, WENN ICH EIN VOEGLEIN WAER, OB-LA-DI OB-LA-DA

2253 MUSIC #29 $5.00 FROM AMNION. 18 CENTURY DRAWING ROOM, FAME, COLOR ORGAN, WHAT I DID FOR LOVE, PROGRAMMABLE METRDOMOME, SOLFEGGIETTO, I'M FALLING IN LOVE WITH YOU, PEACE IN THE VALLEY, HOUSE OF TKE RISING SUN, A HARD DAY NIGHT, DEEP PURPLE, JEUSE LOVE ME, IVORY PLACES, STARDUST, BE STILL MY SOUL, IT IS WELL WITH MY SOUL

2254 MUSIC #30 $5.00 FROM AMNION, MERRY CHRISTMAS, HEY PAULA, CHORAL, FELLS SO GOOD, I HAVE DECIDED TO FOLLOW JESUS, HALLELUJAH, PATRIOTIC MEDLEY, NETHERLANDS, FIDDLE ON THE ROOF MEDLEY (calls files), HAYDN'S SONATA #2, VARIATIONS ON A THEME, THE MASTERPIECE, ONE IN A MILLION, NADIA'S THEME

2255 MUSIC #31 $5.00 FROM AMNION, MIDNIGHT COWBOY, SINGING VOICE SCALES, INAVENTION IN F, PRELUDE #1 IN C, YES WE HAVE NO BANANAS, I SAW THREE SHIPS ON CHRISTMAS DAY, EXCELSIS DEO GLORIA, LITTLE TOWN OF BETHLEHEM, DECK THE HALLS, THE FIRST NOEL, GOD REST YE MERRY GENTLEMEN, HARK' THE HERALD ANGELS, HOLY NIGHT, JINGLE BELLS, JOY TO THE WORLD, AWAY IN A MANGER, IT CAME UPON A MIDNIGHT, O COME ALL YE FAITHFUL

2256 MUSIC #32 $5.00 XBASIC,BY JET, SILENT NIGHT I, O TANNENBAUM, SILENCE NIGHT II, ARE YOU LONESOME TONIGHT, COLOR SPIRTES, BATTLE HYMN OF THE REPUBLICS, BROWN EYES #2, I'M FOREVER BLOWING BUBBLES

4103 MUSIC #33 $2.00 FREEWARE BY ROMAN MAJER FROM GERMANY,- A/E AMORADA, IN THE MOOD, FLOHWALZER, CHARLESTON

2101 MUSIC #34 $5.00 DIGITAL MUSIC BY STEPHEN D PEACOCK -4 PARTS PLAYS SONGS, COMPOSES A NEW SONG, ADD TO THE WORK FILE AND PRINTS NUMBERS ON STAFF, THE FOLLOWING SONGS ARE ON ON DISK AND PLAYED ON A PIANO, AFTON, BACK3, BICYCLE, HERO, HYMN1, JOY, MARCH, TAVERN, THANK

MARKETPLACE

(the marketplace is a fund raiser for the club, that is, the "profit" goes to maintain the quality of this Newsletter. In general the price listed splits the difference between cost and retail. Please help your Club.)

MILLERS GRAPHICS	
DISKASSEMBLER	18.50
ORPHAN CHRONICLES (priceless)	9.95
ADVANCED DIAGNOSTICS	18.50
EXPLORER	22.50
NIGHT MISSION	18.50
GRAM KRACKER (80K EXPANDED)	185.00
GK UTILITY I	10.00
SMART PROGRAMING FOR SPRITES	6.25
MYARC	
RS232	82.00
D/D DISK CONTROLLER	155.00
128K RAM DISK/SPOOLER	175.00
512K RAM DISK/SPOOLER	280.00
EXTENDED BASIC II LEVEL IV	80.00
128K RAM DISK W/XBASIC II	235.00
512K RAM DISK W/XBASIC II	340.00
INSCEBOT	
TI-ARTIST	17.00
DISPLAY MASTER	12.00
ARTIST EXTRAS	6.00
MEGATRONICS	
EXTENDED BASIC II PLUS	72.50
INTERN (BOOK ON GPL)	16.50
128K GRAM CARD	227.50
HARDWARE & SUPPLIES	
TEAC 55BV DSDD DRIVES	110.00
DISKETTES DSDD	1.00
64K EPSON INT. PRINT BUFFER	45.00
COLOR RIBBONS (EPSON)	4.00
BACK ISSUES	
SUPER 99 MONTHLY	1.25
MICROPENDIUM	1.25
SMART PROGRAMMER JUNE 1986	1.50
BEST OF NEWSLETTERS W/DISK	5.00
FORTH NOTES VOL 1-5 (2.50 EA)	10.00
BEGINNER'S FORTH NOTEBOOK	2.50
ASSEMBLY NOTES VOL 1	2.50
TECHNICAL AND BUSINESS BOOKS	5.00
SAMS BOOKS (VARIOUS)	5.00
SAMS BOOKS WITH CASSETTES	7.50

HORIZON RAM DISK

We are now taking orders for this new Ram Disk. It is available in several formats, both assembled and kit form. Group purchase will enable us to get a discount. Please advise your intent

GENIAL TRAVelER

This is a "diskazine" packed with 720 sectors of valuable information and programs each issue. Assembly and Basic are included. Programs are ready to run. You get SIX issues for $30. Send check to:

Barry Traver, Editor
GENIAL TRAVelER
835 Green Valley Drive
Philadelphia, PA 19128

THE SMART PROGRAMMER

This is the successor to Craig Miller's TSP (and he still contributes) and Super 99 Monthly, edited by Richard Mitchell. Richard edits the combined publication. Also filled with great articles. Cost is: $18 (U.S.&Canada 1st Cl),$15(U.S.3rd Cl),$32(foreign air). Check to:

Bytemaster Computer Services
171 Mustang St.
Sulphur, LA 70663

MICROPENDIUM

Nearing the end of its third full year of publication, and still worth reading. Informative articles, as well as user notes and letters 48 pages per issue (including ads). $15 per year (3rd cl.) Add $3.50 for Canada, or for U.S. 1st cl.

Micropendium
John Koloen, Publisher
P.O. Box 1343
Round Rock, TX 78680

ORPHAN CHRONICLES

Ron Albright's wonderful story of ALL OF US. $10. + $2 shipping Available from LA 99'er User Group, or from Miller Graphics 1475 W. Cypress Ave., San Dimas, CA 91773 (CA. Res add 6.5% Sales tax)

CLUB OFFICERS

President:		Membership Chairman:	
Terrie Masters	(213) 271-6930	Tom Freeman:	(213) 454-1943
Vice President:		Librarian:	
George F. Steffen	(213) 329-3527	Fred Moore	(213) 670-4293
Secretary		Library Assistant:	
Terry Wilson	(213) 563-3869	Chick De Marti	(213) 532-8499
Treasurer		Library Assistant:	
Margaret H. Hutton	(213) 541-5359	Allen S. Whiteman	(213) 379-8031
Editor:		Equipment Chairman:	
Terrie Masters	(213) 271-6930	Joe Fierstein:	(213) 377-9834

Topics solicits advertisers at the following rates:

Full page:	$20.00
Half page:	12.00
Quarter page:	8.00

All submitted advertisements must be camera ready.

MEETINGS

OCTOBER	22nd
NOVEMBER	26th
DECEMBER	18th

LIKE OUR MEETINGS? TELL A FRIEND!

CLUB MEETINGS

Los Angeles 99er Computer Group: Forth Wednesday of each month, 7:15 PM, at Torrance Library, 3031 Torrance Blvd., Torrance

Pomona Valley 99ers Computer Group: Second Monday of each month, 7:00 PM, at Cortez Elementary , 12750 Carrisa Ave, Chino. Call Joy Warner, 982-9971, nights.

San Fernando Valley 99er Computer Group: Second Tuesday each month, 7:30 PM, Doctor's Conferance Room, Sherman Oaks Community Hospital, 4929 Van Nuys Blvd., Sherman Oaks.

San Gabriel Valley 99/4 Users Group: First Wednesday of each month at West Covina Public Library, 1601 W. Covina Parkway, West Covina.

Users Group of Orange County: Third Thursday of each month, 7:30 PM at Westchester Community Service Center (1 block east of Beach Blvd.), Jackson and Westminster, Westminster, CA.

* The first line on the address label shows the last issue you will receive for members or the last issue received by us for exchange.

Board Meetings for the LA 99ers is held on the 1st Tuesday of each month at MERIT SAVINGS at 18501 Western Ave. Gardena
The meetings starts at 7:15. *** EVERYONE IS INVITED ***

FIRST CLASS

Exchng * Aug 86

Miami Country Area 99/4A UG
P. O. Box 1194
Peru, IN 46970

LA 99ers Computer Group
P.O. Box 3547
Gardena, CA 90247-7247

99'er West '86